

North Coast (Q09/020). The canopy in this site is relative low density and the understorey is grazed, therefore neither ecological unit is a good representative example of its type.

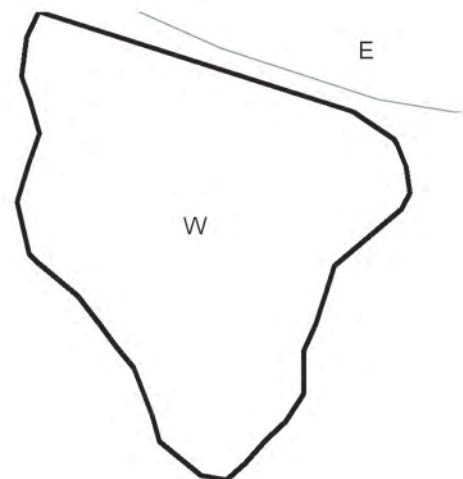
**NGAMOTU FARM POND**

Survey no. Q09/031  
 Survey date 30 November 2005  
 Grid reference Q09 287 484  
 Area 1.6 ha



**Q09/031 Ngamotou Farm Pond**

S = Shrubland  
 F = Forest  
 W = Wetland  
 E = Estuarine



Altitude 4–18 m asl

***Ecological units***

- (a) Open water (constructed freshwater farm pond) (99%)
- (b) Lake clubrush reedland on constructed pond fringe (1%)

***Landform/geology***

Man-made pond/lake.

***Vegetation***

This site constitutes a large freshwater farm pond, created through the construction of an embankment and road across the upper end of a tidal inlet. Across the road there is a mangrove shrubland which is part of the Whakaki River estuary. The site is surrounded by pasture and has a small area of planted indigenous shrubland on its western side comprising abundant tarata and frequent ti kouka, taupata, mapou, karamu, harakeke and karaka. The elongated, elliptical shape of the tarata leaves in the planting does not match the character of local tarata trees (which are pale yellow and have wider, more rounded leaves) and it seems the plant stock may not have been sourced locally. The taupata is almost definitely not local because this species was not found growing naturally in Otamatea ED Northland during the present survey and has never been recorded previously. These plantings have been excluded from the site. Scattered kauri rickers are present in the paddocks around the site.

(a) The open water is entirely unshaded and water quality appears to be poor judging by the abundance of suspended particles and the nutrient-rich runoff from the pastoral land in the immediate catchment.

(b) A small lake clubrush reedland with occasional harakeke and taupata occupies the western corner of the pond. Lake clubrush may have established naturally or may be planted.

***Fauna***

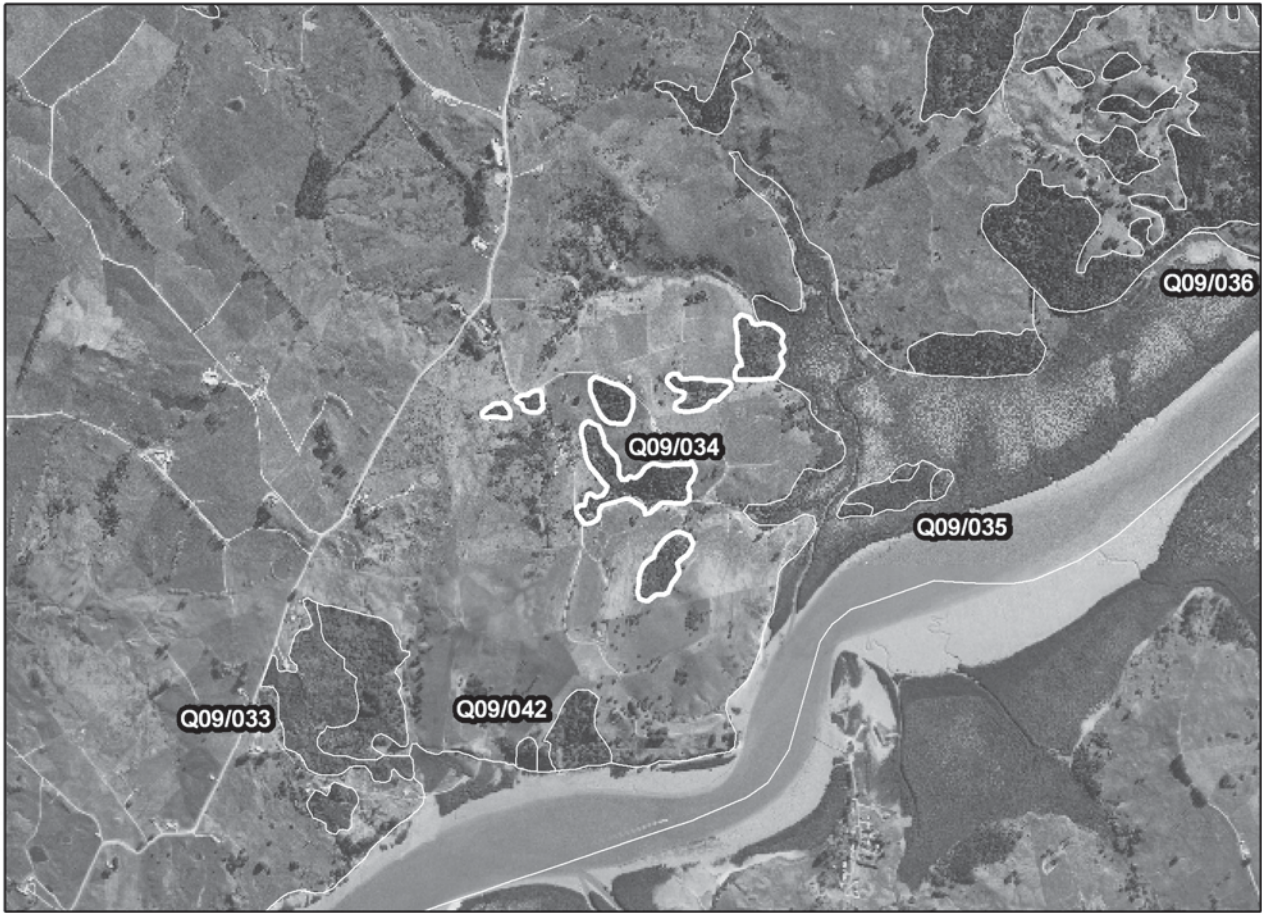
Many common indigenous waterbirds were observed using this pond and its surrounds, including paradise shelduck, spur-winged plover, pied stilt and pukeko.

***Significance***

As a habitat for common waterbirds this site has some ecological value, despite being a constructed pond with very little natural vegetation around it. The establishment of plants which are not locally sourced could be a threat to the genetic adaptations of the same species found in nearby high value forest remnants, such as Timber Bay Forest (Q09/001) and Puketotara Forest Remnant 10 (Q09/017), if these plants reproduce with them and produce viable offspring.

**WIKI BROWN ROAD FOREST REMNANTS**

Survey no.	Q09/034
Survey date	6 December 2005
Grid reference	Q09 384 478 (7 remnants)
Area	14.1 ha
Altitude	0–80 m asl



## Q09/034 Wiki Brown Road Forest Remnants

S = Shrubland  
 F = Forest  
 W = Wetland  
 E = Estuarine

0 250 500 1,000 Metres



### ***Ecological units***

- (a) Totara forest on moderate to steep hillslope (60%)
- (b) Totara-kowhai-puriri forest on moderate to steep hillslope (40%)

### ***Landform/geology***

Hillslopes and gullies underlain by Oligocene micritic limestone (Mahurangi Limestone, Motatau Complex).

### ***Vegetation***

This site comprises seven small forest remnants scattered across an exotic pastoral landscape on the eastern Oneriri Peninsula. Gorse scrub is establishing in some of the intervening areas. Livestock roam freely between pasture and forest remnants, trampling undergrowth and grazing on palatable forest plants. There is a small stream flowing through the middle of the site toward the Oruawharo River North Coast (Q09/020). Two distinct forest types are present: (a) Totara dominates the canopy in the majority of the remnants, with frequent lancewood, bush lawyer, and occasional kahikatea, tarata, ti kouka and mingimingi. This type tends to occur on the drier, upper slopes.

(b) Wetter areas also have abundant totara, though it is associated commonly with kowhai and puriri in these areas.

### ***Fauna***

Not surveyed.

### ***Significance***

Fragmentation and grazing effects are very pronounced in these remnants, and neither of the ecological units present is considered a representative example of its type. The forest provides minimal catchment and riparian protection.

## **UNNAMED ISLAND IN ORUAWHARO RIVER**

Survey no.	Q09/035
Survey date	6 December 2005
Grid reference	Q09 391 476
Area	4.0 ha (1.4 ha forest, 2.6 ha shrubland)
Altitude	sea level

### ***Ecological units***

(a) Manuka-mapou shrubland on gentle coastal margin (75%)

(b) Kanuka-kowhai forest on gentle coastal margin (20%)

(c) Black wattle forest on gentle coastal margin (5%)

### ***Landform/geology***

Not surveyed.

### ***Vegetation***

Surrounded by extensive mangrove forest on the western side of the Oruawharo River, there is a low, elongated, unnamed island less than 100 m from the nearest point on the Oneriri Peninsula coast. Visibility of this site was poor due to restricted views from public roads and tall mangroves blocking views from the river (by boat). Vegetation types and cover have been estimated using the limited information gathered in the field, combined with interpretation of recent aerial photography (flown in 2002).

(a) Shrubland with abundant manuka and common mapou covers the centre of the island. Mahoe and kanuka are frequent, with occasional kowhai and ponga.

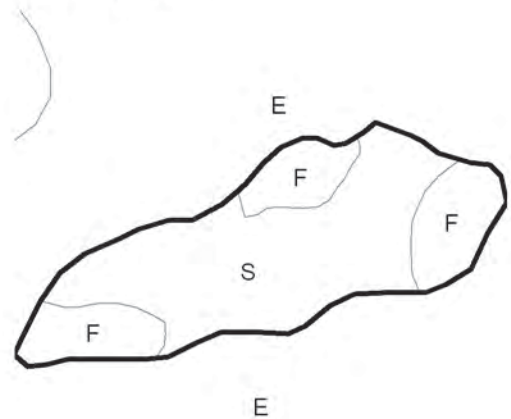
(b) The western and eastern ends of the island support small stands of kanuka-kowhai forest with frequent totara and tarata.



## Q09/035 Unnamed Island in Oruawhoro River

S = Shrubland  
 F = Forest  
 W = Wetland  
 E = Estuarine

0 250 500 1,000 Metres



(c) On the northern side of the island a grove of black wattle trees extends approximately 10 m above the surrounding shrubland. These are the most prominent feature of the island's vegetation.

### ***Fauna***

Not surveyed.

### ***Significance***

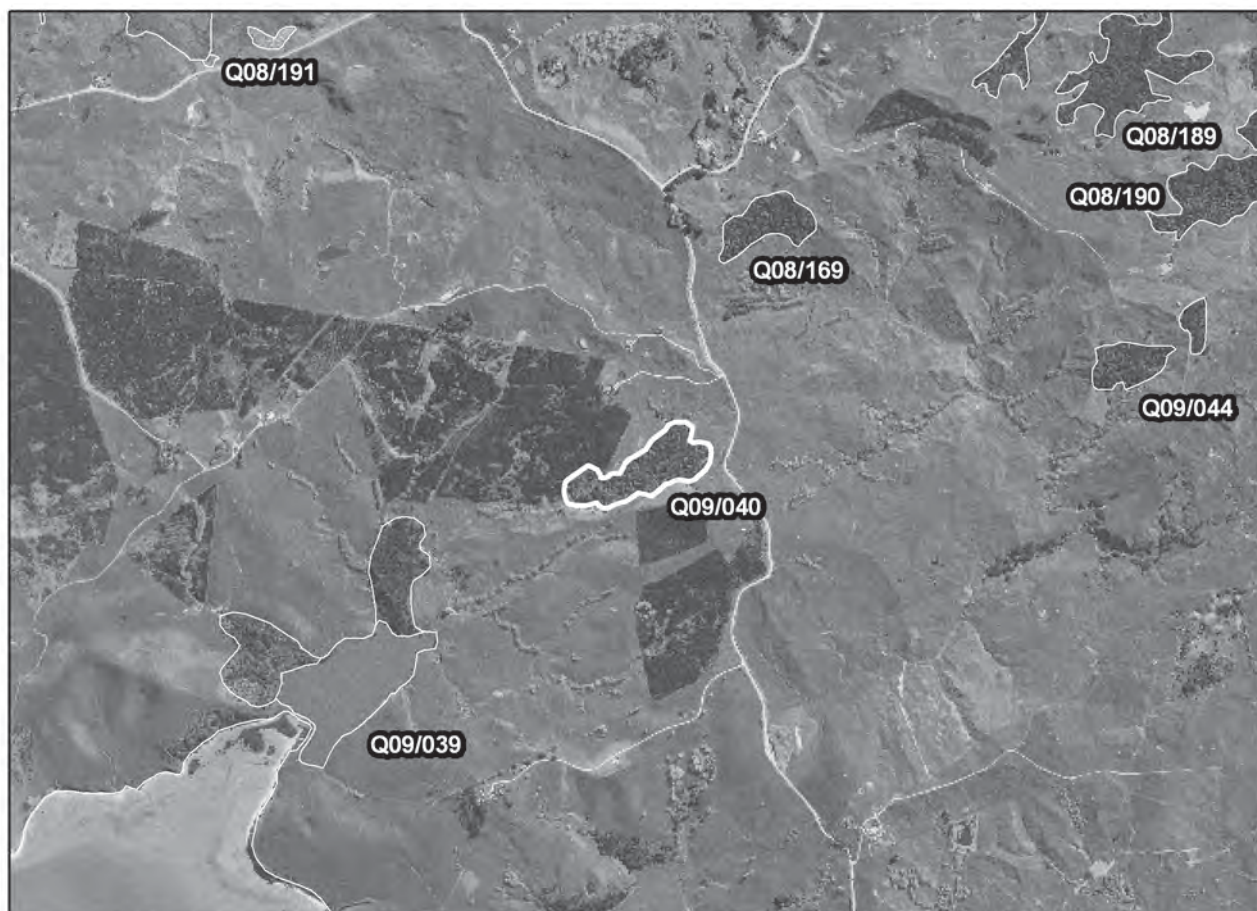
None of the ecological units appear representative, but information is insufficient to fully assess the significance of this site.

## ONERIRI ROAD FOREST REMNANT 1

Survey no. Q09/040  
Survey date 13 December 2005  
Grid reference Q09 329 495  
Area 6.4 ha  
Altitude 40-84 m asl

### *Ecological unit*

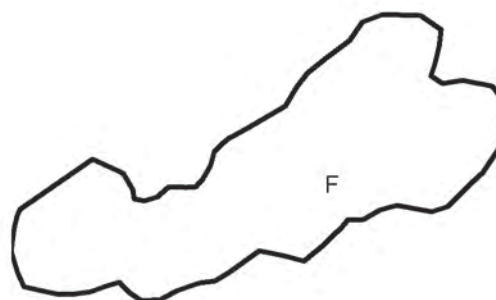
(a) Totara-kahikatea forest in gully (100%)



## Q09/040 Oneriri Road Forest Remnant 1

S = Shrubland  
F = Forest  
W = Wetland  
E = Estuarine

0 250 500 1,000 Metres



### ***Landform/geology***

Gully underlain by melange (undifferentiated Mangakahia & Motatau Complex lithologies).

### ***Vegetation***

This site comprises a small indigenous forest remnant in the head of a gully to the west of Oneriri Road, directly upstream of Wainonororo Constructed Lake (Q09/039). The site is surrounded by pasture and is probably grazed. Totara is more abundant than kahikatea in the canopy, and the next most common species (under 20% cover) are kanuka and puriri. Totara tends to occur on paddock edges, while occasional kahikatea is emergent above the canopy along the margins of the ephemeral stream which flows southwest through the site. There is also occasional mamangi, titoki, ti kouka, mapou, kowhai and karaka.

### ***Fauna***

Kingfisher.

### ***Significance***

Though not a representative example of totara-kahikatea gully forest, this site provides protection to the riparian margins of the stream and serves to stabilise soil in the catchment. It also serves as a habitat 'stepping stone' for mobile wildlife, such as kingfishers and other forest birds, which move between a number of forest remnants to meet their habitat needs in this mainly pastoral landscape.

## **TOPUNI RIVER FOREST REMNANT 2**

Survey no.	Q09/041
Survey date	6 December 2005
Grid reference	Q09 422 489 (2 remnants)
Area	2.2 ha (1.9 ha forest, 0.3 ha wetland)
Altitude	0-39 m asl

### ***Ecological units***

- (a) Kauri-kanuka forest on gentle coastal margin (60%)
- (b) Totara-puriri forest on moderate to steep hillslope (20%)
- (c) Open water (constructed freshwater farm pond) (20%)

### ***Landform/geology***

Not surveyed.

### ***Vegetation***

The site comprises two very small forest remnants and a dammed pond on a small creek running down to the mangroves of the Oruawharo River North Coast (Q09/020). The surrounding landscape is pasture which is grazed.

(a) Kauri rickers and kanuka are common in the remnant contiguous with the coast. Kowhai and puriri are frequent, with occasional totara, tanekaha and kahikatea.

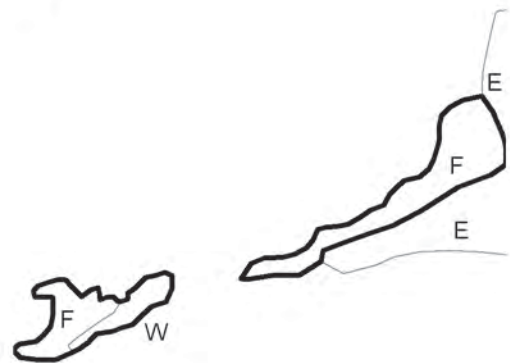
(b) Common totara and puriri with frequent kanuka grow in a small patch next to the farm pond.



## Q09/041 Topuni River Forest Remnant 2

S = Shrubland  
 F = Forest  
 W = Wetland  
 E = Estuarine

0 250 500 1,000 Metres



### ***Fauna***

Australasian harrier.

### ***Significance***

This site is very degraded, though it provides limited riparian protection and habitat for waterbirds.



## ORUAWHARO RIVER FOREST REMNANT 1

Survey no. Q09/042  
Survey date 6 December 2005  
Grid reference Q09 381 468 (2 remnants)  
Area 4.5 ha  
Altitude 0-80 m asl

### *Ecological unit*

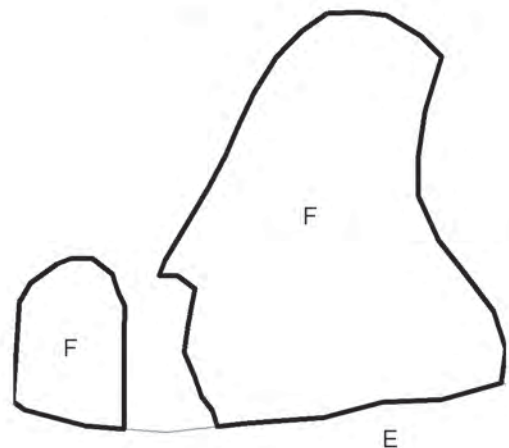
(a) Karaka-puriri-totara forest on steep coastal margin (100%)



## Q09/042 Oruawharo River Forest Remnant 1

S = Shrubland  
F = Forest  
W = Wetland  
E = Estuarine

0 250 500 1,000 Metres



### ***Landform/geology***

Coastal hillside underlain by Oligocene micritic limestone (Mahurangi Limestone, Motatau Complex).

### ***Vegetation***

This site encompasses a small coastal broadleaved-podocarp forest remnant on a steep northern slope above the Oruawharo River which is surrounded by grazed pasture. The canopy is open in several places and there appears to be stock access throughout. Weed threats in the surrounding landscape include elaeagnus, blackberry and woolly nightshade. Karaka and puriri are particularly dense in the canopy, and totara is also common. Kohekohe and kowhai are frequent with occasional ti kouka.

### ***Fauna***

Not surveyed.

### ***Significance***

Because it is small and disturbed by livestock, the ecological unit present is not considered to be a good example of coastal forest. Its value is primarily as an indigenous vegetation buffer to the estuarine habitats of the Oruawharo River North Coast (Q09/020).

## **KOMITI BAY FOREST REMNANT**

Survey no.	Q09/048
Survey date	12 January 2006
Grid reference	Q09 238 500
Area	8.2 ha
Altitude	0-60 m asl

### ***Ecological units***

- (a) Kanuka-pohutukawa forest on gentle coastal margin (90%)
- (b) Pohutukawa-radiata pine treeland on coastal cliff (10%)

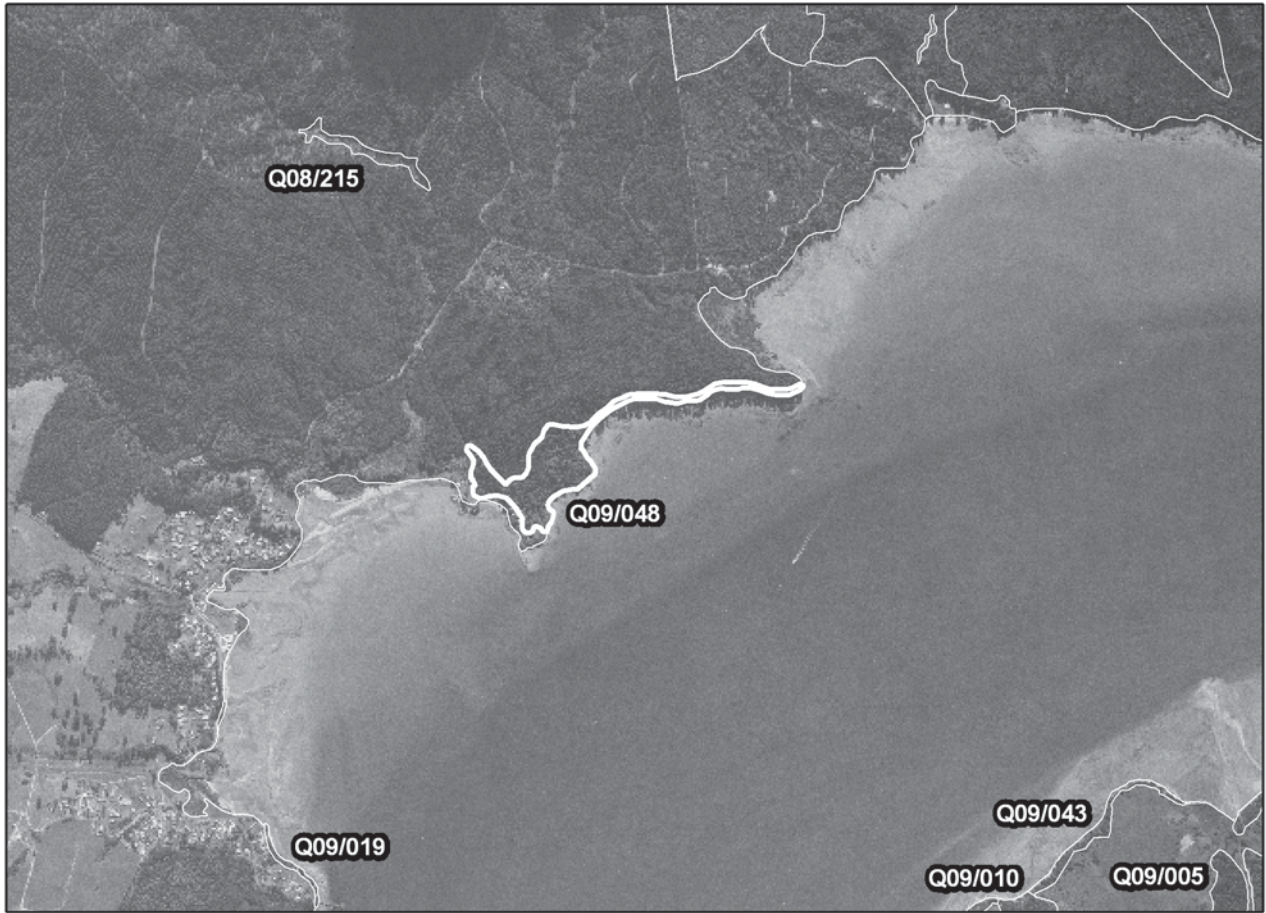
### ***Landform/geology***

Coastal hillsides underlain by Miocene andesitic tuff breccia, pumiceous pyroclastic flow deposits and a basalt flow (Waitakere Group).

### ***Vegetation***

This site comprises indigenous coastal forest on a small headland which forms the northern boundary of Komiti Bay on the Hukatere peninsula. On the seaward side of the remnant there are mudflats and sandflats which drop off steeply into deeper water of the Otamatea River Confluence (Q09/021). On the landward side, the indigenous forest is buffered by extensive radiata pine plantations. The western and southern coastal edges of the remnant have houses nestled within them. These have been excluded from the site. This site also includes coastal cliffs extending eastwards as far as Puketi Point (approximately 1 km).

- (a) Kanuka is abundant and pohutukawa is common in the canopy of the main forest block on the point. Mamangi is frequent and ti kouka is occasional.



## Q09/048 Komiti Bay Forest Remnant

S = Shrubland  
 F = Forest  
 W = Wetland  
 E = Estuarine

0 250 500 1,000 Metres



(b) Pohutukawa and radiata pine are common along the cliff margins. The understorey comprises frequent wind-stunted mapou, harakeke, koromiko, kowharawhara and scattered manuka, turutu, pigeonwood and pampas.

### ***Fauna***

Not surveyed.

### ***Significance***

Neither of the ecological units present is considered a good example of its type. Proximity of this remnant to residential housing potentially puts it at risk from domestic cats and dogs, as well as exposes it to weed invasion, as is happening in nearby Tinopai. Despite these concerns, the vegetation in the site is still a valuable buffer to the coastal fringe.